

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1-27. (Cancelled)

28. (New) A method of inducing at least a partial immune tolerance to a carbohydrate antigen in a mammal, comprising:

- (a) administering a population of engineered white blood cells to the mammal one or more times,

wherein the engineered cells express the carbohydrate antigen, thereby inducing at least partial immune tolerance to the antigen in the mammal.

29. (New) The method of claim 28, wherein the expressed carbohydrate antigen does not activate T-cells.

30. (New) The method of claim 29, wherein the carbohydrate antigen comprises a blood group antigen.

31. (New) The method of claim 30 wherein the blood group antigen is selected from the group consisting of: blood group A antigen, blood group B antigen, and both blood group A antigen and blood group B antigen.

32. (New) The method of claim 29, wherein the carbohydrate antigen comprises the α -gal epitope.

33. (New) The method of claim 28, wherein engineering comprises inserting a nucleic acid encoding an enzyme capable of producing part of the carbohydrate antigen into the white blood cells.
34. (New) The method of claim 33 wherein the nucleic acid encoding the enzyme capable of producing part of the antigen is inserted into the white blood cells by using a replication defective adenovirus.
35. (New) The method of claim 33, wherein the enzyme is selected from the group consisting of: the A blood group transferase, the B blood group transferase, and both the A and B blood group transferases.
36. (New) The method of claim 33, wherein the enzyme is α 1,3 galactosyltransferase.
37. (New) The method of claim 28 further comprising:
(b) exposing the mammal to the antigen.
38. (New) The method of claim 37 wherein (b) comprises transplanting a tissue comprising the antigen into the mammal.
39. (New) The method of claim 28 wherein the mammal is a human or the cells are human white blood cells.
40. (New) The method of claim 37 further comprising:
(c) measuring the immune reaction of the mammal to the antigen.
41. (New) The method of claim 40 further comprising:

- (d) comparing the immune reaction of the mammal to the antigen with the immune reaction of a control mammal that had not been administered an engineered population of white blood cells that express the antigen.
42. (New) The method of claim 28 wherein the white blood cells comprise lymphocytes.
43. (New) The method of claim 28 further comprising:
suppressing the immune response of the mammal concurrently with (a).
44. (New) The method of claim 28 further comprising:
removing substantially all cells that react with the protein antigen from the mammal prior to (a).
45. (New) The method of claim 28 wherein the mammal is essentially free of circulating antibodies that react specifically with the antigen.
46. (New) A method of inducing at least a partial immune tolerance to a carbohydrate antigen in a mammal, comprising:
(a) engineering a population of white blood cells to express a carbohydrate antigen;
(b) administering the engineered cells to the mammal one or more times,
wherein the engineered cells express the carbohydrate antigen,
thereby inducing at least partial immune tolerance of the antigen in the mammal.
47. (New) The method of claim 46, wherein the population of white blood cells to be engineered and administered is obtained from the mammal.

48. (New) The method of claim 46, wherein the carbohydrate antigen is selected from the group consisting of: blood group A antigen, blood group B antigen, both blood group A antigen and blood group B antigen, and the α -gal epitope.

49. (New) The method of claim 46, wherein the carbohydrate antigen is an antigenic fragment consisting of blood group A antigen, blood group B antigen, both blood group A antigen and blood group B antigen, and the α -gal epitope, and wherein the antigenic fragment does not activate T-cells.

50. (New) The method of claim 46, wherein the white blood cells comprise lymphocytes.